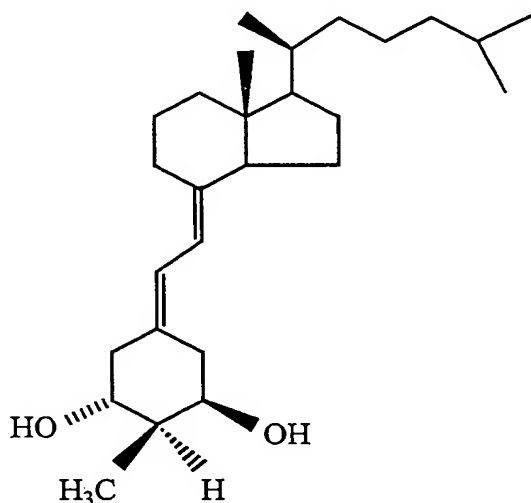


## CLAIMS

We claim:

1. A method of treating psoriasis comprising administering to a patient with psoriasis an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:



2. The method of claim 1 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin is administered orally.

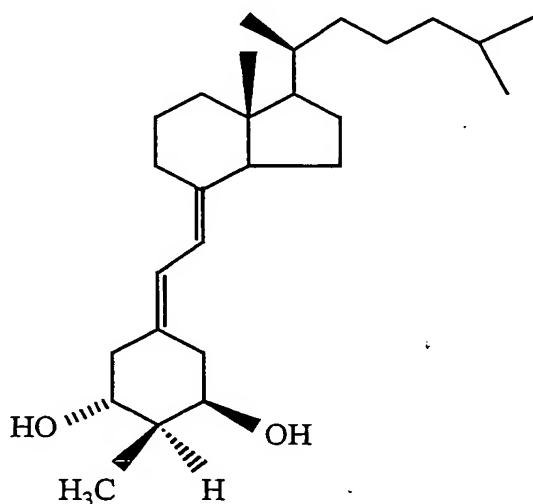
3. The method of claim 1 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin is administered parenterally.

4. The method of claim 1 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin is administered transdermally.

5. The method of claim 1 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin is administered topically.

6. The method of claim 1 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin is administered in a dosage of from about 0.01 $\mu$ g/day to about 100  $\mu$ g/day.

7. A method of treating a disease selected from the group consisting of leukemia, colon cancer, breast cancer or prostate cancer comprising administering to a patient with said disease an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin having the formula:



8. The method of claim 7 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.

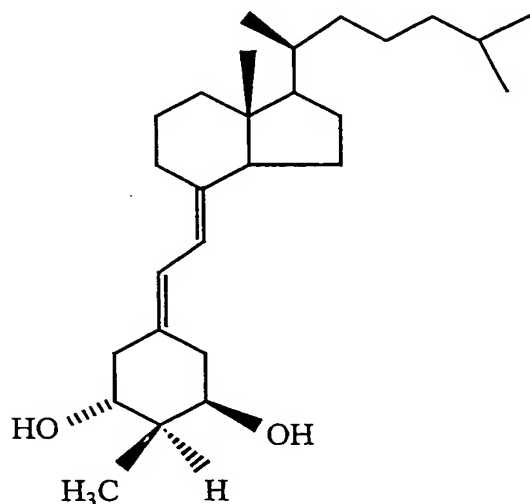
9. The method of claim 7 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.

10. The method of claim 7 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

11. The method of claim 7 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01 $\mu$ g/day to about 100  $\mu$ g/day.

12. A method of treating an autoimmune disease selected from the group consisting of multiple sclerosis, lupis, diabetes, mellitus, host versus graft reaction, and rejection of organ transplants, comprising administering to a patient

with said disease an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-  
5 vitamin D<sub>3</sub> having the formula:



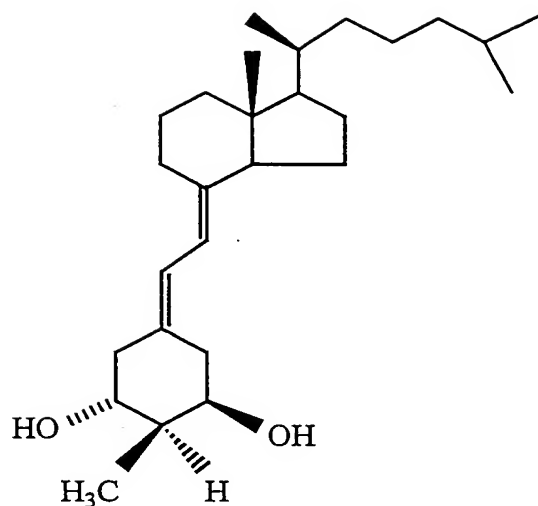
13. The method of claim 12 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.

14. The method of claim 12 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.

15. The method of claim 12 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

16. The method of claim 12 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01  $\mu$ g/day to about 100  $\mu$ g/day.

17. A method of treating an inflammatory disease selected from the group consisting of rheumatoid arthritis, asthma, and inflammatory bowel diseases, comprising administering to a patient with said disease an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:



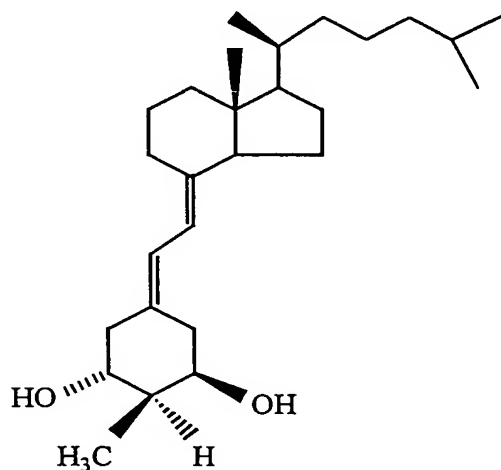
18. The method of claim 17 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.

19. The method of claim 17 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.

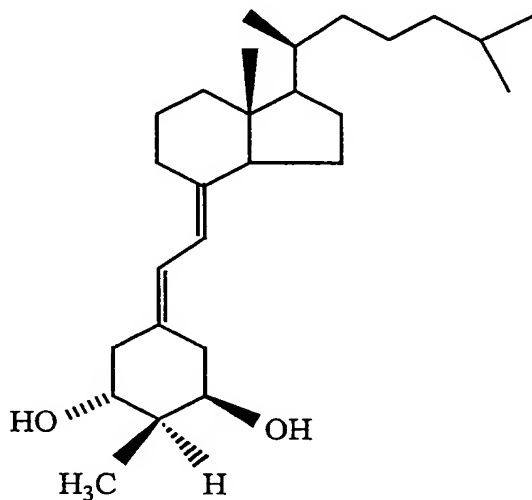
20. The method of claim 17 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

21. The method of claim 17 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01  $\mu$ g/day to about 100  $\mu$ g/day.

22. (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:

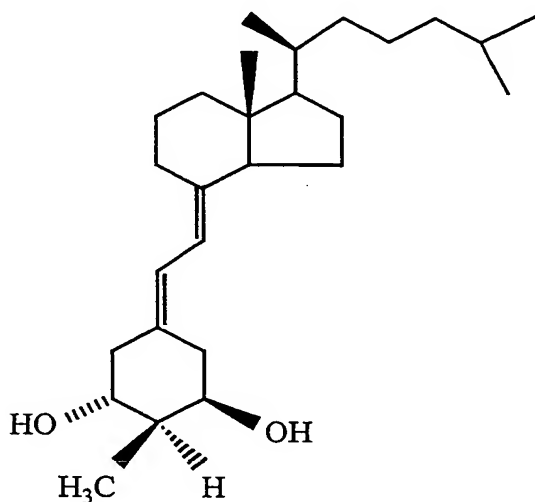


23. A method of treating a skin condition selected from the group consisting of wrinkles, lack of adequate skin firmness, lack of adequate dermal hydration and insufficient sebum secretion which comprises administering to a patient with said skin condition an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:
- 5



24. The method of claim 23 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.
25. The method of claim 23 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.
26. The method of claim 23 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.
27. The method of claim 23 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered topically.
28. The method of claim 23 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01  $\mu$ g/day to about 100  $\mu$ g/day.

29. A method of treating a metabolic bone disease where it is desired to maintain or increase bone mass comprising administering to a patient with said disease an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:



30. The method of claim 29 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.

31. The method of claim 29 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.

32. The method of claim 29 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

33. The method of claim 29 wherein (20S)-1 $\alpha$ -hydroxy-2 $\alpha$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01 $\mu$ g/day to about 100  $\mu$ g/day.

34. The method of claim 29 wherein the disease is senile osteoporosis.

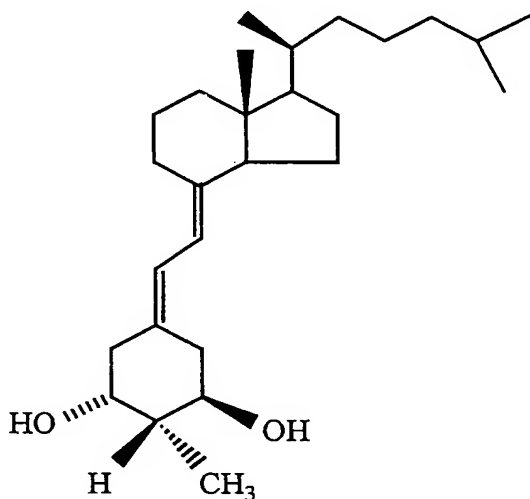
35. The method of claim 29 wherein the disease is postmenopausal osteoporosis.

36. The method of claim 29 wherein the disease is steroid-induced osteoporosis.

37. The method of claim 29 wherein the disease is low bone turnover osteoporosis.

38. The method of claim 29 wherein the disease is osteomalacia.

39. A method of treating psoriasis comprising administering to a patient with psoriasis an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:



40. The method of claim 39 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.

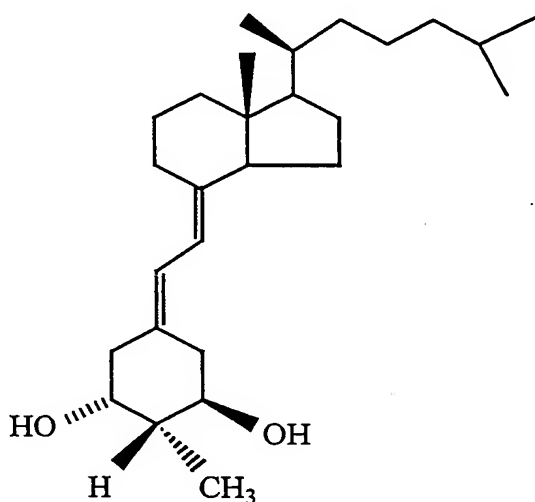
41. The method of claim 39 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.

42. The method of claim 39 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

43. The method of claim 39 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered topically.

44. The method of claim 39 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01 $\mu$ g/day to about 100  $\mu$ g/day.

45. A method of treating a disease selected from the group consisting of leukemia, colon cancer, breast cancer or prostate cancer comprising administering to a patient with said disease an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:



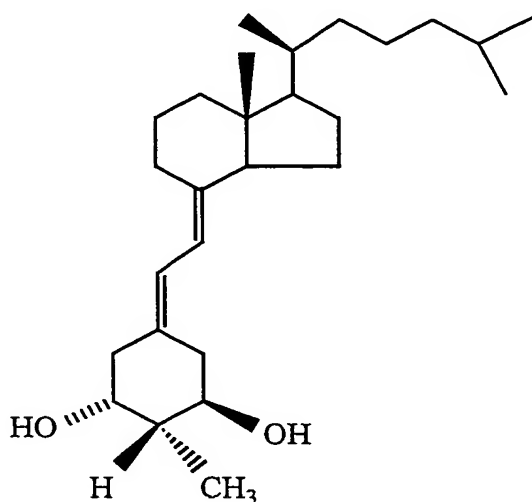
46. The method of claim 45 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.

47. The method of claim 45 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.

48. The method of claim 45 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

49. The method of claim 45 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01 $\mu$ g/day to about 100  $\mu$ g/day.

50. A method of treating an autoimmune disease selected from the group consisting of multiple sclerosis, lupis, diabetes, mellitus, host versus graft reaction, and rejection of organ transplants, comprising administering to a patient with said disease an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-  
5 vitamin D<sub>3</sub> having the formula:



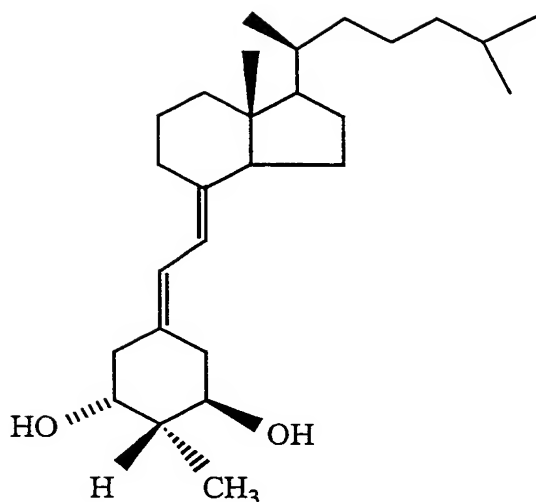
51. The method of claim 50 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.

52. The method of claim 50 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.

53. The method of claim 50 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

54. The method of claim 50 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01  $\mu$ g/day to about 100  $\mu$ g/day.

55. A method of treating an inflammatory disease selected from the group consisting of rheumatoid arthritis, asthma, and inflammatory bowel diseases, comprising administering to a patient with said disease an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:



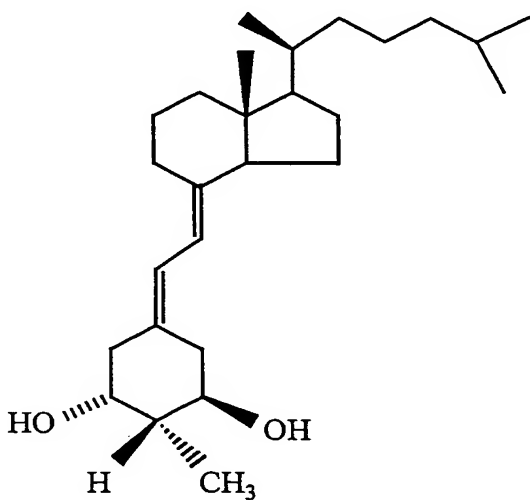
56. The method of claim 55 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.

57. The method of claim 55 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.

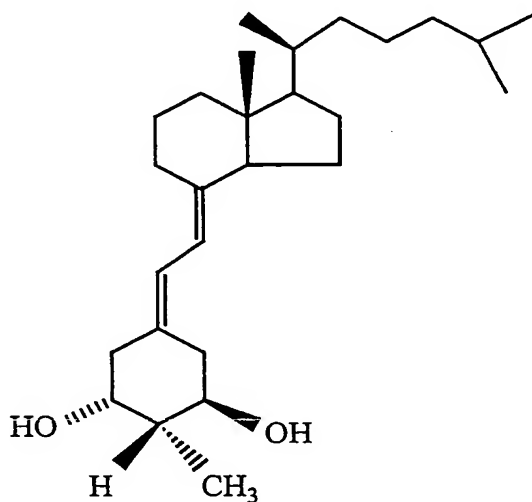
58. The method of claim 55 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

59. The method of claim 55 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01  $\mu$ g/day to about 100  $\mu$ g/day.

60. (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:



61. A method of treating a skin condition selected from the group consisting of wrinkles, lack of adequate skin firmness, lack of adequate dermal hydration and insufficient sebum secretion which comprises administering to a patient with said skin condition an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:



62. The method of claim 61 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered orally.

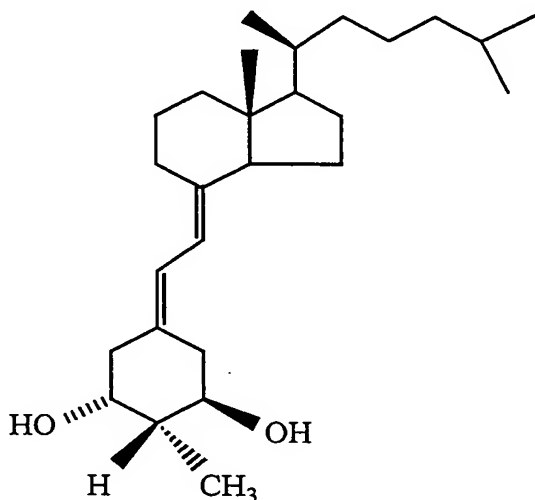
63. The method of claim 61 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered parenterally.

64. The method of claim 61 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

65. The method of claim 61 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered topically.

66. The method of claim 61 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01 $\mu$ g/day to about 100  $\mu$ g/day.

67. A method of treating a metabolic bone disease where it is desired to maintain or increase bone mass comprising administering to a patient with said disease an effective amount of (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> having the formula:



68. The method of claim 67 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-  
vitamin D<sub>3</sub> is administered orally.

69. The method of claim 67 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-  
vitamin D<sub>3</sub> is administered parenterally.

70. The method of claim 67 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered transdermally.

71. The method of claim 67 wherein (20S)-1 $\alpha$ -hydroxy-2 $\beta$ -methyl-19-nor-vitamin D<sub>3</sub> is administered in a dosage of from about 0.01 $\mu$ g/day to about 100  $\mu$ g/day.

72. The method of claim 67 wherein the disease is senile osteoporosis.

73. The method of claim 67 wherein the disease is postmenopausal osteoporosis.

74. The method of claim 67 wherein the disease is steroid-induced osteoporosis.

75. The method of claim 67 wherein the disease is low bone turnover osteoporosis.

76. The method of claim 67 wherein the disease is osteomalacia.

77. A compound having the formula:

